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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT : Thierry Nouvet et al.  
SERIAL NO. : 09/649,931 EXAMINER : Raymond N. Phan  
FILED : August 29, 2000 ART UNIT : 2181  
FOR : ACCESS SCHEME FOR A COLLECTIVE RESOURCE USING A  
PLURALITY OF STATES (As Amended)

APPEAL BRIEF TRANSMITTAL LETTER

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Dear Sir:


Appellants respectfully submit three copies of a Brief For Appellants that includes an Appendix with the pending claims. The Appeal Brief is now due on February 11, 2004.

Appellants enclose a check in the amount of \$330.00 covering the requisite Government Fee.

Should the Examiner deem that there are any issues which may be best resolved by telephone communication, kindly telephone Applicants undersigned representative at the

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Respectfully submitted,  
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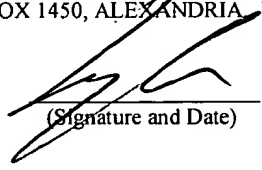
Date: February 6, 2004

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(Name of Registered Rep.)

  
(Signature and Date)



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Before the Board of Patent Appeals and Interferences

#1/4  
2-19-04

**In re the Application**

**Inventor** : **Thierry Nouvet et al.**  
**Application No.** : **09/649,931**  
**Filed** : **August 29, 2000**  
**For** : **ACCESS SCHEME FOR A COLLECTIVE  
RESOURCE USING A PLURALITY OF STATES  
(As Amended)**

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**APPEAL BRIEF**

**On Appeal from Group Art Unit 2181**

02/13/2004 DTESSEM1 00000027 09649931

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**Date: Feb. 6, 2004**

**Michael J. Ure**  
**Registration No. 33,089**  
**By: Steve Cha**  
**Attorney for Applicant**  
**Registration No. 44,069**

**TABLE OF CONTENTS**

	<b><u>Page</u></b>
I. REAL PARTY IN INTEREST.....	3
II. RELATED APPEALS AND INTERFERENCES.....	3
III. STATUS OF CLAIMS.....	3
IV. STATUS OF AMENDMENTS.....	3
V. SUMMARY OF THE INVENTION.....	3-4
VI. ISSUES.....	4
VII. GROUPING OF CLAIMS.....	4
VIII. ARGUMENT.....	5-7
IX. CONCLUSION.....	8
X. APPENDIX: THE CLAIMS ON APPEAL.....	9-10

**TABLE OF CASES**

<i>In re Fritch</i> , 973 F.2d 1260, 1266, 23 U.S.P.Q. 2d 1780, 1783-84 (Fed. Cir. 1992). .....	7
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**I. REAL PARTY IN INTEREST**

The real party in interest is the assignee of the present application, U.S. Philips Corporation, and not the party named in the above caption.

**II. RELATED APPEALS AND INTERFERENCES**

With regard to identifying by number and filing date all other appeals or interferences known to Appellant which will directly effect or be directly affected by or have a bearing on the Board's decision in this appeal, Appellant is not aware of any such appeals or interferences.

**III. STATUS OF CLAIMS**

Claims 7, 8 and 9 have been presented for examination. All of these claims are pending, stand finally rejected, and form the subject matter of the present appeal.

**IV. STATUS OF AMENDMENTS**

The Amendment after the Final Office Action filed September 22, 2003 has been entered into the record for purposes of Appeal, but, according to the Examiner, did not place the application in condition for allowance. It is noted that claim 10 was cancelled by the above-referenced Amendment.

**V. SUMMARY OF THE INVENTION**

The presently claimed invention recites a functional system (or a data processing system or computer program on a computer readable medium) that includes a collective

resource (Fig. 1, SDRAM, specification at page 5, lines 5-20), a plurality of functional units B1, B2 and B3 (Fig. 1, specification at page 5, line 16-17). A memory interface (Fig. 1, INT) is in communication with both the collective resource (SDRAM, Fig. 1, specification at lines 19-20) and the plurality of functional units (Fig. 1, specification at page 5, lines 17-18). The interface INT performs an arbitration between the various functional units (B1, B2, B3 Fig. 1) at the level of access to the collective resource (specification, page 5, lines 27-28) to determine the time and order of functional units that will have access to the collective resource. The interface INT implements a plurality of states in a predetermined manner (specification at page 4, lines 11-12) and each of the states includes a period of access and a pre-defined order of priority (specification at page 4, lines 13-16) for enabling access to the collective resource by one of the functional units.

## **VI. ISSUE**

1. Whether claims 7-9 stand correctly rejected under 35 U.S.C. §103(a) over Arimilli et al. (U.S. 5,896,539, hereafter "Arimilli") in view of Holt et al. (U.S. 5,263,163, hereafter "Holt").

## **VII. GROUPING OF CLAIMS**

Claims 7-9 stand or fall together.

### VIII. ARGUMENT

It is respectfully submitted that none of claims 7-9 would have been obvious to a person of ordinary skill in the art in view of the combination of Arimilli and Holt.

It is alleged in the Final Office Action dated August 11, 2003 that Arimilli discloses an interface in communication with a collective resource and functional units to implement a scheme for managing access to said collective resource by the functional units, but *admittedly fails to disclose that the interface implements a plurality of predetermined states in a predetermined manner.*

However, it is alleged in the Final Office Action that Holt discloses arbitration including a predetermined number of cycles in each of which at least one user places its arbitration signal with a signal appearing on the line to determine the result within arbitration, and the progression of the arbitration within each cycle from a first cycle to a subsequent cycle, and thus instant claims 7-9 would have been obvious to an artisan in view of the combination of Arimilli and Holt.

It is respectfully submitted that the combination of Arimilli and Holt fails to disclose or suggest the claimed invention as the combination of references fails at least to disclose or suggest that an interface implements a plurality of states in a predetermined manner, wherein each state includes a period of access and a pre-defined order of priority for enabling access to the collective resource. In the presently claimed invention, there is a guarantee of a certain minimum access period to access the collective resource for any function having the highest priority in one or more states for a given period of time (specification, page 4, lines 11-12) that is implemented by the interface.

In contrast, the combination of Arimilli and Holt fails to disclose or suggest the above implementation of a period of access and a pre-defined order of priority, as Holt's message priority is defined by each user's send buffers and is dependent on message content and related urgency (please see Holt at column 14, lines 30-34).

Furthermore, Holt discloses at column 4, lines 26-43 that "the progression of the arbitration does not depend upon a single master clock, or upon synchronizing the individual user clocks." Holt also states that "the users perform the arbitration" using their independent clocks (column 4, lines 33-35). Holt further discloses that no one user serves as the master during arbitration. This "teaching" contrasts with the presently claimed invention, wherein the interface controls not just the order but the access time each functional unit is permitted to exchange data with the collective resource.

In contrast to the combination of Arimilli and Holt, the presently claimed invention recites that the *interface implements the plurality of states in a predetermined manner*. Fig. 4 of the instant invention provides some detail of how an the interface is arranged, and it can clearly be see then in the drawing that there is an arbitration unit (ARB). Thus, the instantly claimed invention is distinguishable from the combination of Arimilli and Holt, which teach that that the arbitration is performed by the functional units, and not by an arbitration unit of the interface, as in the presently claimed in invention.

With regard to the Examiner's assertion on the continuation sheet of the Advisory Action mailed October 28, 2003, Applicants respectfully disagree that the combination of Arimilli and Holt disclose or suggest all the claimed elements. At column 13, lines 5-19 Holt discloses an arbitration tournament wherein functional users (without the use of an



interface as in the presently claimed invention), compete in a "tournament" to decide which devices have priority. The fact that a second tournament is often suspended until a first tournament is finished to prevent two or more tournaments from taking place during the same data transfer fails to disclose or suggest an access period and pre-determined order of priority that enables access to the collective resource by the functional units. The "tournament" disclosed by Holt is not an access period, as the devices are competing for priority, and not accessing the collective resource.

For at least the above reasons, it is respectfully submitted that none of the instant claims would have been obvious to a person of ordinary skill in the art over the combination of references. The combination of references fails to disclose or suggest all of the claimed elements.

Furthermore, it is respectfully submitted that regard to the above rejection under 35 U.S.C. §103(a), the Court of Appeals for the Federal Circuit has held that:

Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under section 103, teachings of references can be combined *only* if there is some suggestion or incentive to do so. Although couched in terms of combining teachings found in the prior art, the same inquiry must be carried out in the context of a purported obvious "modification" of the prior art. The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification.

*In re Fritch*, 973 F.2d 1260, 1266, 23 U.S.P.Q. 2d 1780, 1783-84 (Fed. Cir. 1992). Here, the Final Office Action has not set forth a *prima facie* case of obviousness as the suggested desirability is of the interface implementing the plurality of states in a predetermined manner, wherein each state includes a period of access and a pre-defined

order of priority, is taught by the Applicant's claimed invention and is lacking in any teaching or suggestion that can be gleaned from the combination of references.

For all of the above reasons, Applicants respectfully submit that claims 7-9 are patentably distinguishable over the combination of Arimilli and Holt.

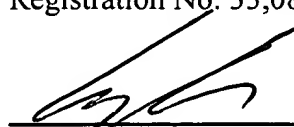
## IX. CONCLUSION

In view of the above analysis, it is respectfully submitted that the combination of references, whether taken individually or in combination, fails to anticipate or render obvious the subject matter of any of the present claims. Therefore, based on the law and the facts, it is respectfully requested that the Honorable Board reverse all grounds of rejection, as a Notice of Allowance is respectfully solicited.

Respectfully submitted,

Michael J. Ure  
Registration No. 33,089

Date: February 6, 2004

By:   
Steve Cha  
Attorney for Applicant  
Registration No. 42,576

**X. APPENDIX: THE CLAIMS ON APPEAL**

7. A functional system, comprising:

a collective resource;

a plurality of functional units requiring access to said collective resource; and

an interface in electrical communication with said collective resource and said

functional units to implement a scheme for managing access to said collective resource by said functional units,

wherein said interface implements a plurality of states in a predetermined manner, and wherein each state includes a period of access and a pre-defined order of priority for enabling access to said collective resource by said functional units.

8. A data processing system, comprising:

a collective memory;

a plurality of processors requiring access to said collective resource; and

an interface in electrical communication with said collective memory and said

processors to implement a scheme for managing access to said collective memory by said processors,

wherein said interface implements a plurality of states in a predetermined manner, and

wherein each state includes period of access and a pre-defined order of priority for facilitating access to said collective memory by said processors.

9. A computer readable medium storing a computer program product for managing access to a collective memory by a plurality of functional units, said computer readable medium, comprising:

computer readable code for implementing a plurality of states in a predetermined manner, and

for each state, computer readable code for providing a period of access and pre-defining an order of priority for facilitating access to said collective resource by said functional units.